POPULATION TODAY

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FROM THE EDITOR'S DESK

It's coming, it's coming, it's *almost* here.

"It" is a total fertility rate (TFR) of 2.0 average lifetime births per woman. The U.S. has not seen 2.0 since 1972.

Because of changing social and economic trends and the contraceptive revolution, the TFR has dropped steadily since the early 1960s, until a low of 1.7 was reached in 1976. Since that year, the TFR has coasted at about 1.8.

The TFR is a synthetic measure. It does not track the actual lifetime fertility of a group of women; rather it takes a "snapshot" of a society's fertility based on age-specific fertility rates at a moment in time. Many demographers theorize that one reason for its relatively low level is women whose low fertility was in part due to their deciding to delay childbearing. Their plans did not show up in the "snapshot."

Now, rumors persist that when the counting is complete for 1989 fertility measures, the U.S. TFR is likely to *round* to 2.0 (that is, it will be 1.95 or higher). And the figures suggest that delayed childbearing does seem to have been a factor in the low TFRs of the 1970s and early 1980s.

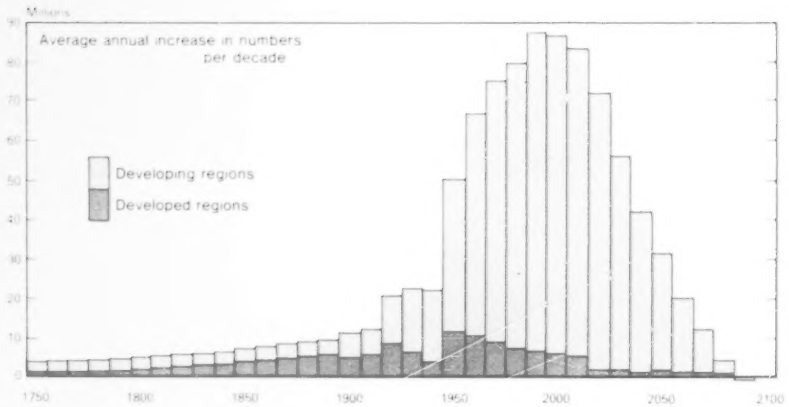
Not only is 2.0 looming, but according to provisional figures, 1989 was the first year since 1964 to report 4 million births. (See "Population Update," page 9.) From 1954 to 1964, during the bumper years of the post-World War II baby boom, the U.S. had an unbroken run of eleven 4-million-birth years. Those new arrivals helped boost the national population from 163 million to 192 million.

These two "magic" numbers—2.0 and 4 million—may be a random ripple or an epochal watershed. Will they now increase, decline, or stabilize? At this juncture we have no idea.

—Art Haupt

SPEAKING GRAPHICALLY

World Population: Average Annual Increase for Each Decade, 1750-2100 (Projected)



The above bar graph depicts world population growth past and future by showing each decade's total increase (expressed as the average annual increase over that decade). As can be seen, the 1990s are projected to be the historic peak decade of population growth in terms of absolute numbers.

Source: "World Population in Transition," *Population Bulletin*, by Thomas W. Merrick and PRB staff.

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S-Night: Counting the Homeless

The word *homeless* never appears in census enumeration interviews. Nor do census forms have any checkoff box for "Street Person." Nonetheless, S-Night, the night of March 20-21, 1990, marked the most intense effort ever to include America's homeless in the decennial census.

Previous censuses had included a "casual count" operation, under which enumerators had tallied people in transient situations such as missions or flophouses. But this year, on S-Night (also known as Streets and Shelters Night), census workers across the U.S. fanned out to canvass city streets, freeway overpasses, and (from the outside) abandoned buildings—anywhere homeless people were likely to take shelter.

Art Haupt

A mobile soup kitchen distributes meals on the streets.

This census of the homeless—one of the many operations of the 1990 Census—was not without controversy. Some advocates for the homeless tried to block the count in some shelters, on grounds that it would inevitably result in an undercount and allow officials to assert there were fewer homeless than claimed. (In recent years, estimates of the homeless population, have ranged from 250,000-350,000 to 1.5 million-3 million.)

On the eve of S-Night, Washington, D.C. was even the site for a symbolic statistical protest. Homeless advocates dumped a pile of sand in front of the Department of Commerce on 14th Street. A placard posted atop the mound read: LIKE GRAINS OF SAND, THE HOMELESS CAN'T BE COUNTED. (In fact, estimating the number of sand grains in a sand pile would be a snap for statisticians, once they agreed on what defines a single sand grain.)

In 1991 and beyond, when detailed 1990 Census data become available, researchers will be able to extract detailed statistics on characteristics of people living in shelters, low-cost hotels, and other group quarters. (Data on characteristics of people enumerated on the street will of necessity be less detailed.) In addition to S-Night data, the April 1 Census of housing units will provide statistics on people who may be considered precariously housed (e.g., "doubled up" with other families or otherwise sharing living quarters).

Shelters and Streets

On S-Night, two New York City census takers were shot at. In a number of cities, enumerators were dogged by television and print journalists, to the extent that journalistic hovering caused some interviews to be broken off to preserve confidentiality. (Conveniently, world and national news events took a holiday during late March, enabling S-Night to be widely featured in the media. S-Night probably got more coverage than did Census Day, April 1, a week and a half later.)

The March 20-21 count involved an estimated 15,000 census workers and cost $2.7 million. In many places, including Washington, the count had to be extended to the next night because of the number of places to be checked and the limited number of personnel available.

The Bureau's strong suit in taking a census is its massive coast-to-coast address lists. Once you have in hand a good address of a dwelling unit, that unit remains on your to-do list until the paperwork comes in to indicate that it's been taken care of.

To prepare for S-Night, the Bureau compiled lists of shelters, commercial spaces, and street areas where the homeless were believed to frequent. But these sites, particularly the street areas, are by definition more ephemeral as residences than addresses of single-family dwellings.

Most census workers earned about $7.50 per hour and received one day's training to master the Census Bureau's paper-management drill. They were specifically instructed to dress casually (absolutely no ties), and their only uniform was the official Census Bureau safety vest (available in white or red). Whatever aura of authority they possessed derived from the red-white-and-blue enumerator ID badges clipped to their jackets.

The Individual Census Report that the workers passed out to S-Night respondents resembled the regular census form, minus housing questions. Like the regular form, the ICR comes in short (seven questions) and long (33 questions) versions. In the shelters, every sixth respondent was given the long form. Out on the streets, enumerators briefly interviewed respondents and wrote down their answers on the short form.

By all accounts, shelter occupants were cooperative—in the world of the poor and the dispossessed, if nowhere else, the good name of the U.S.

Continued on next page

Homeless Count

Continued from previous page

Government retains a certain charisma that encourages cooperation, notwithstanding the fact that census workers were guests of the shelter and had been instructed never, ever to browbeat anyone with his or her legal obligation to answer the census. Only in rare instances did shelter people flat-out refuse to fill out the form.

More commonly heard was a grassroots skepticism as to whether the personal data were *really* confidential and wouldn't be passed to any and all activities of the U.S. Government. (The census enumerators' calling card—the first item they handed respondents—was an English/Spanish handbill describing the privacy safeguards protecting respondents' answers. As they labored to explain, census data *are* totally confidential, are used for statistical purposes only, and are never passed to any other government agency.)

Finally, the 33-question ICR must surely have been a conversation stopper in many shelters, asking as it does a multitude of income-and-recent-work questions of people who in many cases have had all too little of either.

April 1 and After

While a major operation in its own right, S-Night was just the opening skirmish of the 1990 Census as a whole. April 1—Census Day—when the long and short forms for the nation's 100-million-plus dwelling units were due to be mailed back, was the major front. Now comes the mopping-up, which continues through Spring 1990 as census workers use phone or personal visits to chase down, on a one-to-one basis, those census forms that were delivered but are not shown as having been logged back in.

In mid-April 1990 the nonresponse follow-up gets rolling in earnest, and a total of 440,000 to 480,000 workers are expected to come aboard (not all at the same time), for mostly six- to eight-week stints. If all goes well, this phase of the operation should be virtually completed by mid-July.

—*A.H.*

WASHINGTON WATCH

As the 101st Congress moved into its second session and into the 1990s, much of the legislative activity around international population assistance programs was similar to action on these issues in recent years. The two main topics in the beginning of 1990, as was the case in 1987, 1988, and 1989, were: debate over the so-called "Mexico City policy" regarding abortion and consideration of renewed U.S. funding to the United Nation's population program.

Both these issues are strongly influenced by the domestic political imbroglio between prochoice and prolife groups over abortion rights. The debates on these issues are emotional, highly political, and involve large citizen lobbying coalitions.

In the first session of the 101st Congress during 1989, a $14.7 billion foreign aid appropriations bill for Fiscal Year 1990 was agreed to by the Bush Administration and the House and Senate; $220 million of the bill was assigned to the international population assistance program, an increase over the $197 million level of the 1989 bill. However, the 1990 foreign aid bill was agreed to only after heated debate over a controversial amendment to restore funding to UNFPA.

Aid for UNFPA?

In the first session, Congress approved a foreign aid bill containing an earmark for the United Nations Population Fund (UNFPA). President Bush vetoed the bill, on the grounds that UNFPA had continued its financial support of China's family planning program, which has been accused of coercive abortion practices. The alleged policies, denied by the Chinese, resulted in withdrawal of U.S. funding from UNFPA programs in 1985—the U.S. provided about 20 percent of UNFPA's budget in 1984.

In February 1990, Rep. Peter Kostmayer (D-Pa.) introduced a bill, HR 4075, "to authorize increased funding for international population assistance and to provide a United States contribution to the United Nations Population Fund."

The bill calls for $500 million from the FY 1991 foreign aid bill to be used for international population assistance. Of this $500 million, the bill allocates $60 million, or 16 percent of the overall population amount, whichever is less, to be contributed to UNFPA.

The UNFPA contribution also carries three conditions for the funding process:

1. The contribution to UNFPA must be kept in a separate, segregated account.
2. None of the funds may be used for China.
3. UNFPA must return the contribution if it uses any of the funds in China or for abortion.

As of March 26, the bill had 106 congressional cosponsors, but no House hearings on the bill had been either held or were scheduled. The House Foreign Affairs Committee was not expected to consider the bill this session.

In a surprise move, however, Rep. Kostmayer on March 28 introduced a UNFPA amendment for Romania during consideration of a House supplemental authorization for Eastern Europe (HR 4445). By a vote of 21 to 8, the committee members approved allocations of $500,000 each to UNFPA and the International Planned Parenthood Federation (IPPF) to provide family planning services in Romania. The U.S. had also stopped its funding to most of IPPF in 1985.

Next, the UNFPA amendment will be considered by the Foreign Operations Subcommittee of the House Appropriations Committee before possibly moving on to the full House for consideration. In addition, HR 4075 is

likely to be introduced either before the House Foreign Operations Subcommittee or later on the floor of the full House.

Mexico City Policy Hearing

In 1984, at the International Population Conference in Mexico City, the Reagan Administration initiated what came to be known as the Mexico City policy, which denies U.S. funds to foreign, nongovernmental organizations that provide any abortion-related services or information, even with their own funds.

Last year, in the House Foreign Affairs Committee, Reps. Chester Atkins (D-Mass.) and Olympia Snowe (R-Me.) introduced a bill (HR 720) that would negate Mexico City by calling on U.S. guidelines for funding of family planning programs to be the same for international programs as they are for domestic ones.

In the first session of the 101st Congress, a hearing on the bill produced spirited debate by House members and national leaders of the prochoice and prolife communities. In January 1990, the bill was reintroduced. Backers of the Atkins-Snowe bill had not expected any further hearings on the bill before the House Foreign Affairs Committee, which is chaired by Rep. Dante Fascell (D-Fla.).

However, during the same House Foreign Affairs Committee hearing that produced the IPPF and UNFPA funding for Romania, Rep. Kostmayer also introduced the Atkins-Snowe bill as an amendment to the supplemental authorization bill, and it was also approved, 17 to 10.

The Bush Administration has often expressed its opposition to repeal of the Mexico City policy, and a vigorous fight over the Atkins-Snowe language is now expected to ensue.

—Mark Haskell

Mark Haskell is international program officer in the Washington, D.C. office of the Population Resource Center. The Center monitors legislative issues of concern to the Population Association of America. Neither the Center nor the Association advocates any particular population policy but works to protect funding for quality demographic research.

SURVEY REPORT

Togo

The Togolese Republic, a long, narrow Western Africa country of 3.3 million people, is growing almost 3 percent per year. Although the government does not have an official population policy, family well-being is promoted through an integrated maternal/child health and family planning program of the Ministry of Health, as well as through a private organization, ATBEF.

These efforts to promote child spacing are just beginning to have an effect on maternal and child health, according to the results from the 1988 Demographic and Health Survey in Togo (Enquête Démographique et de Santé au Togo, EDST).

At current total fertility rates (TFR), Togolese women will have an average of 6.6 children each during their reproductive lives. Although this rate is almost unchanged from 1961's TFR of 6.4, fertility varies according to a woman's level of education and, especially, her place of residence.

The TFR for women with no education is 6.8 children, and for those with at least a secondary education, it is 4.5. Fertility is also lower among women in urban areas, especially in the capital of Lomé where the TFR is 4.1. By contrast, women in the northern Savanna region have a TFR of 8.3.

Knowledge of contraception is low in Togo. Although more than nine in 10 married women had heard of a contraceptive method, less than half of these women could spontaneously recall a method. Women in urban areas and more educated women were more likely to be able to name a modern method than other women.

Almost three-quarters of married women have practiced family planning at some time, while 10 percent have ever tried a modern contraceptive method. Thirty-four percent of married women are currently using a method of family planning; only 3 percent are using a modern one. The most commonly used method is prolonged abstinence (22 percent), followed by periodic abstinence (6 percent), and withdrawal (2 percent). Fewer than 1 percent of married women are using an IUD or have been sterilized.

Roughly equal proportions of those women using modern methods turn to the public and private sectors for services and supplies. Public hospitals serve almost four in 10 users of modern methods, and pharmacies supply about one in four users.

Reasons for not using contraception, given by women judged to be at risk of pregnancy (nonpregnant nonusers), indicate insufficient knowledge of family planning. Twenty-two percent said they lacked information about contraception, 9 percent considered contraception bad for their health, and 8 percent said their husbands were opposed.

Communication between spouses about family planning is very limited. About three in five married couples had not discussed family planning in the year prior to the survey. While almost 70 percent of married women recognizing a method say they approve of couples who use family planning, less than half think their husbands approve.

Fifty-two percent of married women may be in need of family planning because they are fertile, not contracepting, and either want no more children (15 percent) or do not wish to become pregnant soon (37 percent). Less than half of these women say they intend to use family planning in the future.

—B.S.

DEMOGRAPHER'S PAGE

Focus On Maternal Mortality

by Nancy Yinger

Allan Rosenfield and Deborah Maine wrote a widely cited article entitled "Maternal Mortality—a Neglected Tragedy: Where is the M in MCH?" in the July 13, 1985, issue of *The Lancet*. The authors expressed concern that the search for ways to reduce high maternal mortality in the developing world had been lost under the (justifiable) avalanche of concern about high infant mortality.

Many programs seemed to assume that what is good for the child is good for the mother. Although some programs can reduce both maternal and infant mortality, most notably family planning programs, Rosenfield and Maine point out that "not only are the causes of maternal death quite different from those of child death but so are the potential remedies."

Definitions and Data

Because of the lack of focus on maternal mortality, information on levels and trends is of poor quality. There are many reasons for this, beginning with inconsistent definitions and/or biased, incomplete data.

To construct maternal mortality rates, the number of maternal deaths (the numerator) should be related to the total number of pregnancies (the denominator). Defining the component parts is not necessarily straightforward. The number of live births is generally assumed to be an acceptable indicator of the number of pregnancies and thus a reasonable estimate for the denominator. However, the denominator will be incomplete to the extent that pregnancies resulting in fetal death are not recorded. High induced abortion rates can also lead to bias in the denominator.

The numerator should include all deaths due to pregnancy and childbirth—deaths taking place before, during, *and* after childbirth. However, women whose pregnancy results in a spontaneous abortion anytime during the first 28 weeks are usually not included in the population at risk of dying from a maternal cause. In addition, not all maternal deaths are due to conditions resulting directly from pregnancy. Some are caused by preexisting conditions which are aggravated by pregnancy.

And what about deaths to pregnant women from accidental or incidental causes? Under the definition quoted in the accompanying box, these deaths should not be included in maternal mortality statistics. However, that convention is not always followed and sometimes the death of any pregnant woman, regardless of cause is counted as a maternal death.[1] Maternal mortality thus defined is a "time of death" measure, analogous to infant morality, which can subsequently be analyzed by cause.[2]

Since it may not be clear whether accidental deaths are being included in the numerator, comparisons using potentially inconsistent definitions should be taken as general trends only. Even given the use of consistent definitions, comparisons over time and place are difficult because the total number of maternal deaths is a function of two variables—fertility (the number of women exposed to the risk of pregnancy) and maternal mortality (of those pregnant, the number exposed to the risk of dying). A reduction in either component can effect a reduction in the proportion of women dying from maternal causes. (See Figure 1.)

In addition to inconsistent definitions, analysts are faced with a paucity of data on maternal mortality. A widely cited source is a 1985 study conducted at the World Health Organization that calculates roughly 500,000 women die each year of maternal causes.[3] This estimate, still the most widely used number of maternal deaths per year, amounts to 1 percent of all deaths worldwide.

The study gives maternal-mortality rates (deaths per 100,000 live births) for national and subnational surveys as well as hospital-based studies for as many years as possible. Despite the many data sources cited in the document, one is still struck by the spotty coverage and by the inconsistencies between sources for many countries.

WHO's Definition of Maternal Death

A maternal death is defined as the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes.

Maternal deaths are divided into two groups: 1) direct obstetric deaths: those resulting from obstetric complications of the pregnant state (pregnancy, labor, and puerperium), from interventions, omissions, incorrect treatment, or from a chain of events resulting from any of the above; 2) indirect obstetric deaths: those resulting from previous existing disease or diseases that developed during pregnancy and which were not due to direct obstetric causes but which were aggravated by physiological effects of pregnancy.

Source. World Health Organization, *International Classification of Diseases*, 9th revision, Geneva, WHO, 1977.

Nancy Yinger
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Table 1. Estimates of Maternal Mortality, by Region

Region	Number of maternal deaths (thousands)	Maternal-mortality rate (per 100,000 live births)
Africa	**150**	**640**
North	24	500
West	54	700
East	46	660
Central	18	690
Southern	8	570
Asia	**308**	**420**
West	14	340
South	230	650
Southeast	52	420
East	12	55
Latin America	**34**	**270**
Central	9	240
Caribbean	2	220
Tropical South	22	310
Temperate South	1	110
Oceania	**2**	**100**
Developing countries	**494**	**450**
Developed countries	**6**	**30**
WORLD	**500**	**390**

Source: Adapted from "Maternal Mortality Rates: A Tabulation of Available Information," Geneva, World Health Organization, 1985, as shown in Ann Starrs, "Preventing the Tragedy of Maternal Deaths: A Report on the International Safe Motherhood Conference," Nairobi, Kenya, February 1987.

In India, for example, one source for 1978 estimates 480 maternal deaths per 100,000 live births while another estimates 1,250 deaths per 100,000 births.

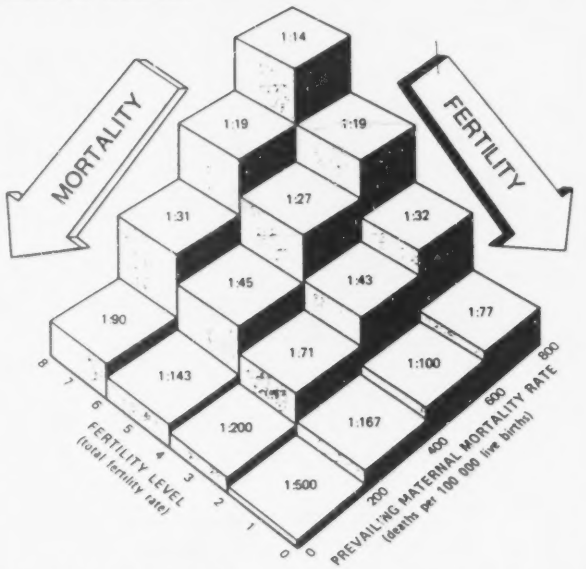
One is also struck by the vast difference in rates between the developing and developed world, a difference much greater than for other mortality measures. Table 1 provides a regional breakdown and shows that of the 500,000 maternal-mortality deaths each year, only about 1 percent (6,000) occur in the developed world. In contrast, about 11 percent of infant deaths take place in the developed world. In addition, while maternal mortality rates estimate the risk of dying for any given pregnancy, women in developing countries face this risk many times and thus are exposed to a very high lifetime risk of dying from maternal causes. (See Table 2.)

Table 2. Estimated Lifetime Chance of Dying from Pregnancy-Related Causes, by Region, 1975-1984

Region	Lifetime chance of maternal death
Africa	1 in 21
Asia	1 in 54
South America	1 in 73
Caribbean	1 in 140
North America	1 in 6,366
Northern Europe	1 in 9,850

Source: Calculated by Dr. Roger Rochat, Emory University School of Medicine, Master in Public Health Program, using maternal-mortality rates from the World Health Organization and total fertility rates from PRB; in Barbara Herz and Anthony R. Measham, *The Safe Motherhood Initiative: Proposals for Action*, Washington, D.C., World Bank, 1987.

Figure 1. Lifetime Risk of Dying from Pregnancy-Related Causes



Source: Figure 9.2 from Erica Royston and Sue Armstrong (Eds.), *Preventing Maternal Deaths*, Geneva: World Health Organization, 1989. Reproduced by permission.

Causes of Maternal Death

The biggest tragedy of maternal mortality is that many of the deaths result from unsafe and often illegal abortions or from complications which could be prevented by proper screening and access to health care and family planning. There are five primary complications that lead to direct obstetric death:

1. **Hemorrhage,** bleeding near the end of pregnancy or at delivery is most common among older women with many children. Where blood transfusion is not available, hemorrhage may be fatal.

2. **Toxemia** is a condition which includes swelling of the feet and hands, high blood pressure, and protein in the urine. It is more likely for women having their first child. While early diagnosis and treatment can greatly lower the risk of death, untreated toxemia can lead to seizures and death.

3. **Sepsis,** infection usually due to complications from an obstructed or difficult delivery, is also caused by unsanitary conditions during delivery.

4. **Septic abortions** often occur with clandestine or traditional abortion methods. Infections can result, leading to sterility or death.

5. **Obstructed labor,** which may lead to hemorrhage or sepsis, results from a birth canal blocked either by small pelvic size or previous injury. Where cesarean section is not available, obstructed labor may be fatal.

Programs That Can Work

If Rosenfield and Maine were to update their article today, they would probably be able to revise their title. Maternal mortality is still a tragedy—but it is a less-neglected tragedy. In the last half of the 1980s, the international health community has begun putting the "M" back in MCH.[4] The 1987 Safe Motherhood Conference recommended a three-pronged approach to reducing maternal mortality:[5]

1. **Stronger community-based**

Continued on page 9

Fertility Around World Shows Surprises

Some remarkable fertility declines have been reported in the developing world, including Bangladesh and Egypt. At the same time, some industrialized countries have displayed some equally surprising fertility increases that confound the conventional zero-growth stereotype of the industrialized world.

Many of the numbers tell a story on the just-published *1990 World Population Data Sheet*, PRB's annual wall chart of detailed data for 175 countries of the world. The Data Sheet, an 18½- × 24-inch chart of demographic and economic measures, projects a world population of 5.321 billion, as of July 1, 1990. The world, which reached 5 billion in 1987, is now almost one-third of the way between 5 and 6 billion. See "Take a Number" (page 10 of this issue) for the absolute numbers behind this year's Data Sheet.

The annual Data Sheet was prepared by PRB demographers Carl Haub, Mary M. Kent, and Machiko Yanagishita. Some population highlights of 1990:

Bangladesh. Preliminary data from the 1989 Bangladesh Fertility Survey indicate a total fertility rate (TFR) of 4.9 lifetime children per woman—2 children fewer than a decade ago. Furthermore, desired family size has dropped in a similar fashion, down to 2.9 children.

The world's ninth most populous nation with a population of 115 million, Bangladesh has historically experienced very high fertility, with women having 6.7 lifetime children on average as recently as 1975-1980.

Although further evaluation is called for, as it stands the newly released TFR figure of 4.9 seems to indicate that the decline that began in the late 1970s and early 1980s picked up speed during the decade. The even lower desired family size suggests that there is room for more fertility decline in Bangladesh.

South Korea. This East Asian country now shows a TFR of just 1.6 children per woman—a figure that would be low for a highly industrialized European country. This follows the 1988 survey conducted by the Korea Institution for Population and Health (see *PT*, September 1989) and can be accounted for by Korea's rapid industrialization and its government's activist approach to family planning.

1990 World Population Data Sheet of the Population Reference Bureau, Inc.

China. Since its rapid 1980s fertility plunge following the promulgation of the one-child policy in 1979, China has hovered in the 2.2-2.5 TFR range. The most recent figure is 2.3.

In July 1990, China will conduct a new population census. China's 1982 Census was enormously successful—the country's first wide-ranging, and extensively published, enumeration. With statistics from a new 1990 Census to compare and contrast with 1982's data cornucopia, demographers will be able to track population trends over time in the world's most populous country, which now contains 1.12 billion people.

India. The world's second-most populous country now stands at 853 million. Its crude birth rate has dropped a point, to 32 births per 1,000 population; its total fertility rate is down a little, to 4.2.

Egypt. This North African country, which contains 55 million people, has experienced a drop in TFR to 4.7. This has been enough to help pull down the TFR for the North Africa region as a whole, from 5.6 in 1989 to 5.2.

Kenya. Often labeled the country with the world's highest fertility (which it may never have been), this East African nation has shown a sharp decline, to 6.7 average lifetime children per woman. The "highest fertility" title is more likely held by another East African country, Rwanda, with a TFR of 8.3.

Meanwhile, in the MDCs

The more developed countries (MDCs), which contain about 22 percent of the world's population, provide other demographic highlights on this year's Data Sheet:

The United States. The Data Sheet now pegs the U.S. TFR at 2.0, the first time the U.S. has seen the "2" level since 1972.

For the first time in years, the U.S. and its northern neighbor Canada, which often seem statistical twins, are diverging in fertility. While the U.S.'s TFR is 2.0, Canada's remains in the 1.7 range.

Japan. Fertility continues to decline in this island nation, which ranks seventh in the world with a population of 124 million. The TFR for 1989 is 1.6.

Europe as a whole. Demographically, the European countries can be categorized in three rough groups according to current fertility trends:

1. *The decliners*—those countries that show steady decline in the direction of the seeming lower limits of MDC fertility (for example, Greece, Ireland, Poland).

2. *The stalled*—those that have already reached their own national fertility "floor" (what level constitutes this floor may be different for different countries) and seem to be holding there (for example, Austria, France, Italy, and the United Kingdom).

3. *The rebounders*—countries that bottomed out years ago, some at very low levels, but now seem headed back upward (for example, Finland, Iceland, Sweden, and West Germany).

The present situation, while complex, in many ways defies the popular stereotype of a low-fertility Northern Europe and a high-fertility Southern one. Sweden (with a TFR of 2.0), Norway (1.8), and Finland (1.7) have significantly higher fertility than Portugal (1.6), Spain (1.5), and Italy (at 1.3, the world's lowest national TFR).

The Data Sheet contains 15

columns of data, including contraceptive prevalence by country and national-government policy on population, where available. It is also available on diskette for IBM PCs and compatibles.

—*A.H.*

Copies of the *1990 World Population Data Sheet* can be ordered from PRB, Circulation Dept., P.O. Box 96152, Washington, D.C. 20090-6152, with checks payable to PRB, or by calling (800) 877-9881. Visa and MasterCard accepted. Prices for the Data Sheet are: $3.00 a single copy; 2-10 copies, $2.75 ea.; 11-50 copies, $2.50 ea.; 51 or more, $2.25 ea.

Orders of $50.00 or less must be prepaid and include $1.00 or 3 percent of total order (whichever is greater) for postage and handling.

The price for the *1990 World Population Data Sheet* on diskette for IBM PCs and compatibles is: $10.00 ea., plus $1.00 for postage and handling. Specify file version (Lotus 1-2-3 version 1A, version 2, or an ASCII file) and diskette type (either 5¼- or 3½-inch diskette) when ordering.

Demographer's Page

Continued from page 7

health care that relies on nonphysician health workers to screen pregnant women, refer high-risk cases for timely help, and provide "preventive" services such as family planning.

2. **Stronger referral services** to serve as backup to community-based care.

3. **An "alarm" and transport system** to transfer women with high-risk pregnancies from the community to the referral facility in time for effective treatment.

Notes

1. E.g., *Report of a working group on health statistics in relation to maternal health and prenatal events, 12-16 September 1983.* Unpublished WHO document DES/ICD-10/83.10.
2. Erica Royston and Sue Armstrong, (Eds.) *Preventing Maternal Deaths*, Geneva: WHO, 1989. Chapter 1 of this volume also summarizes direct and indirect estimation techniques for maternal mortality.
3. World Health Organization, "Maternal Mortality Rates: A Tabulation of Available Information," Geneva, WHO, 1985. Unpublished WHO document FHE/85.2.
4. E.g., "Mothers Lives Matter: Maternal Health in the Community," *Population Reports*, Series L, Number 7, September 1988; and Ann Starrs, "Preventing the Tragedy of Maternal Deaths: A Report on the International Safe Motherhood Conference," Nairobi, Kenya, February 1987. (Cosponsored by the World Bank, World Health Organization, and UN Fund for Population Activities.)
5. Starrs, op. cit.

SOFTWARE

Target Earth Data is a budget-priced educational software package that displays copious data about 219 countries and other geopolitical entities.

The program is largely map-concentrated, and its opening screen is a world map. Selecting a continent via a mouse or keystroke brings up a new, continental map with all countries labeled. Selecting one of these brings up screens of textual national data.

That's the extent of the program. But the data themselves are extensive; besides a variety of demographic rates, they include such specialized data as hospital beds per 1,000 population, official language, religion, and number of newspapers. An unusual listing is a total for "Died in 20th century wars."

The data range from 1983 to 1988, and come from the $29.95 reference book *Target Earth*, from the same company. Print-screen is the only way to print out data, and the program presently cannot sort, average, or display the data in a table.

Target Earth Data is available for $29.95 from Global Mapping International, 1530 Elizabeth St., Pasadena, Calif. 91104; phone (818) 398-2420.

—*A.H.*

POPULATION UPDATE

Estimated United States Population:

As of January 1, 1990	250,122,000
As of January 1, 1989	247,617,000

The above estimates include armed forces overseas and are from U.S. Bureau of the Census, *Current Population Reports*, Series P-25, No. 1054.

Estimated World Population:

As of May 1990	5,305,000,000
Annual growth	93,000,000

Extrapolated from the mid-1990 population on PRB's *1990 World Population Data Sheet*.

Latest Provisional Statistics for the U.S.: December 1989

	12 months ending with December					
	Number		Rate			
Item	1989	1988	1989	1988	1987	1986
Live births	4,021,000	3,913,000	16.2	15.9	15.7	15.5
Deaths	2,155,000	2,171,000	8.7	8.8	8.7	8.7
Natural increase	1,866,000	1,742,000	7.5	7.1	7.0	6.8
Marriages	2,404,000	2,389,000	9.7	9.7	9.9	10.0
Divorces	1,163,000	1,183,000	4.7	4.8	4.8	4.8
Infant deaths	38,900	38,700	9.7	9.9	10.0	10.4
Population base (in millions)	...	...	248.2	245.8	243.4	241.1

Note. Rates are given per 1,000 population, except for infant deaths, which are given per 1,000 live births.

Source. Monthly Vital Statistics Report (Vol. 38, No. 12) from the National Center for Health Statistics.

TAKE A NUMBER

The Absolute Numbers Behind the *1990 World Population Data Sheet*

Country or region (country's world pop. rank in parentheses)	Population mid-1990	Projected pop. change, 1990-2000	Annual births	Annual deaths	Natural increase	Annual infant deaths
WORLD	5,321,268,000	970,561,000	144,386,000	50,931,000	93,456,000	10,490,000
MORE DEVELOPED	1,214,110,000	59,965,000	17,932,000	11,368,000	6,564,000	286,000
LESS DEVELOPED	4,107,158,000	910,596,000	126,454,000	39,562,000	86,892,000	10,204,000
LESS DEVEL. (Excl. China)	2,987,281,000	750,473,000	103,127,000	32,227,000	70,900,000	9,343,000
AFRICA	660,960,000	223,265,000	29,185,000	9,712,000	19,472,000	3,173,000
Northern Africa	143,635,000	38,924,000	5,502,000	1,444,000	4,058,000	481,000
Western Africa	205,648,000	73,607,000	9,668,000	3,513,000	6,154,000	1,147,000
Nigeria (8)	118,819,000	41,932,000	5,489,000	1,996,000	3,493,000	664,000
Eastern Africa	198,880,000	73,875,000	9,333,000	3,302,000	6,031,000	1,084,000
Middle Africa	68,016,000	23,063,000	3,084,000	1,063,000	2,021,000	363,000
Southern Africa	44,781,000	13,796,000	1,597,000	389,000	1,208,000	98,000
ASIA	3,116,386,000	601,446,000	85,664,000	27,285,000	58,378,000	6,340,000
Asia (Excl. China)	1,996,509,000	441,323,000	62,337,000	19,950,000	42,386,000	5,479,000
Western Asia	132,384,000	42,480,000	4,813,000	1,059,000	3,755,000	340,000
Southern Asia	1,192,439,000	292,969,000	41,298,000	13,728,000	27,570,000	4,158,000
Bangladesh (9)	114,783,000	31,820,000	4,499,000	1,653,000	2,847,000	540,000
India (2)	853,373,000	189,157,000	27,308,000	9,216,000	18,092,000	2,594,000
Pakistan (10)	114,649,000	34,498,000	4,999,000	1,525,000	3,474,000	552,000
Southeast Asia	455,297,000	92,164,000	13,193,000	3,848,000	9,345,000	925,000
Indonesia (5)	189,399,000	34,421,000	5,038,000	1,610,000	3,428,000	450,000
East Asia	1,336,266,000	173,833,000	26,359,000	8,651,000	17,708,000	916,000
China (1)	1,119,877,000	160,123,000	23,327,000	7,335,000	15,992,000	861,000
Japan (7)	123,638,000	3,861,000	1,286,000	797,000	488,000	6,000
NORTH AMERICA	278,078,000	19,617,000	4,457,000	2,379,000	2,078,000	42,000
United States (4)	251,398,000	16,868,000	4,073,000	2,187,000	1,885,000	40,000
LATIN AMERICA	447,063,000	88,113,000	12,662,000	3,300,000	9,361,000	687,000
Central America	117,770,000	26,730,000	3,726,000	754,000	2,972,000	191,000
Caribbean	33,510,000	4,683,000	845,000	267,000	578,000	48,000
Tropical South America	247,280,000	50,672,000	7,053,000	1,899,000	5,154,000	419,000
Brazil (6)	150,368,000	29,119,000	4,105,000	1,188,000	2,917,000	259,000
Temperate South America	48,503,000	6,028,000	1,038,000	381,000	658,000	29,000
EUROPE	501,077,000	13,574,000	6,409,000	5,102,000	1,307,000	75,000
Northern Europe	84,355,000	2,091,000	1,153,000	948,000	205,000	10,000
Western Europe	159,134,000	4,638,000	1,956,000	1,618,000	338,000	15,000
Eastern Europe	112,543,000	2,311,000	1,620,000	1,257,000	363,000	27,000
Southern Europe	145,045,000	4,534,000	1,681,000	1,279,000	402,000	24,000
USSR (3)	290,938,000	20,699,000	5,470,000	2,938,000	2,531,000	160,000
OCEANIA	26,766,000	3,847,000	540,000	212,000	327,000	14,000

ADDENDA

"Miss Featherbee," by Leila Cabib

HEARD YOU GOT A JOB, LILI!
IT'S GOING TO BE HARD WORK...WALKING THROUGH NEIGHBORHOODS, TALKING TO PEOPLE AND GATHERING INFORMATION.
I'M AN ENUMERATOR FOR THE 1990 CENSUS!
BUT HOW MANY EMPLOYERS GIVE YOU THE CHANCE TO PARTICIPATE IN A PROJECT THAT AFFECTS THE WHOLE COUNTRY...
AND THEN LET YOU HAVE THE NEXT TEN YEARS OFF?!
3-14
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LEILA

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CURRENT READINGS

PRB welcomes materials on population topics for possible inclusion in Current Readings. Publishers may address review copies to Book Review Editor, POPULATION TODAY, Population Reference Bureau, 777 14th St., N.W., Washington, D.C. 20005.

THE PEOPLING OF HAWAI'I, by Eleanor C. Nordyke. (2nd ed.) Honolulu: University of Hawaii Press, 1989. 329 pages. $16.95 hardback. ISBN 0-82481191-7.

Much has happened in Hawaii, and to it, since the 1977 appearance of the first edition of this readable and authoritative volume.

Few places on earth offer a more pleasant climate or beautiful ocean setting than Hawaii. Little wonder that everybody wants a piece of it. For more than a century the state has been a litmus test of world wealth and power, from the estates of mercantile missionaries and their descendants, to Pearl Harbor and America's Pacific bastion, to oceanfront villas of oil-rich Saudis, and the hotels and shopping centers most recently acquired by Japanese businessmen. The effects of rapid population growth on the island environment are becoming more evident all the time.

Nordyke speaks with concern about the impact of continued population growth on Honolulu, the island community, and the environment. Her concern gives passion to the demographic analysis. Nordyke, who grew up in Hawaii and has spent the last 20 years on the staff of the East-West Population Institute there, writes with authority about the trends that have shaped today's island population, from the early Polynesian settlers to the present melange of American sun-seekers, Asian immigrants, and other groups. Her treatment of Hawaii's current demographic situation is thorough and interesting. The book contains useful tables and figures on the state's demographic characteristics.

The world—itself a global island—has a lot to learn from Hawaii's population dynamics. The second edition of Nordyke's careful analysis of the topic is a good place to begin the lesson.

—Bryant Robey

ENVISIONING A SUSTAINABLE SOCIETY: Learning Our Way Out, by Lester W. Milbrath. Albany: State University of New York Press, 1989. 403 pages. $57.50 hardback; $19.50 paperback. ISBN 0-7914-0162-6; ISBN 0-7914-0163-4.

A new sense of urgency has emerged in recent years over the need for environmental awareness and the necessity of keeping the world environmentally sustainable.

But the shape of such a society, and the most productive agenda for building it, have often seemed less clear. In this manifesto for change, Milbrath endeavors to solve both predicaments. He sees present society as a "dominant social paradigm," bent on growth and dominance over nature, whose sense of compassion is closely restricted to those "near and dear"—a category that excludes not only a large portion of the present population on earth, but also future generations. (He touches on world population growth, which he considers too high. "If we do not learn how to plan for and voluntarily limit human population in the next fifty years," he writes, "nature's own limits will force decline through human deaths.")

To replace this strategy, which ultimately becomes destructive of both the environment and world society, Milbrath proposes a "new environmental paradigm," based on limits to growth, heavy doses of cooperation, and preservation of a viable ecosystem that will provide for us and all other species.

How to get there from here? Milbrath is not optimistic about the prospects for a sudden societal conversion to progressive change, and warns that eventually, disruptive and recurrent portents will inevitably arise from nature. But he hypothesizes that times of turbulence can sometimes lead people "to perceive a new pattern of meaning" in life. Changing our ways will not be simple, but a society that changes easily is likely to be more sustainable than a society that resists change.

—Megan Polzer

Books Received

CROSSROADS: Environmental Priorities for the Future, by Peter Borrelli. Covelo, Calif.: Island Press (P.O. Box 7, Covelo, Calif. 95428), 1988. ISBN 0-933280-68-8.

POPULATION GROWTH AND POVERTY IN RURAL SOUTH ASIA, by Gerry Rodgers. Newbury Park, Calif.: Sage Publications, 1989. ISBN 0-8039-9600-4.

POPULATION PRESSURE, THE ENVIRONMENT, AND AGRICULTURAL INTENSIFICATION, by Uma Lele and Steven W. Stone. Washington, D.C.: World Bank, 1989. ISBN 0-8213-1320-7.

PREGNANCY, CONTRACEPTION, AND FAMILY PLANNING, by E. Jones, J.D. Forrest, S. Henshaw, and J. Silverman. New Haven, Conn.: Yale University Press, 1989. ISBN 0-300-04474-7.

REGIONAL PATTERNS OF MIGRATION IN NEPAL, by Harka Gurung. Honolulu, Hawaii: East-West Center, 1989. ISBN 0-86638-118-X.

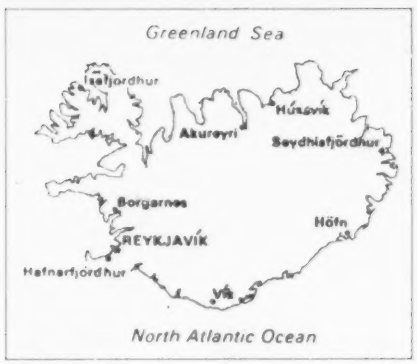
SURVLE ET SANTE DE L'ENFANT EN HAITI, by Michel Cayemittes and Anduch Chanazarian. Port-au-Prince, Haiti: Institut Haitien de L'Enfance, 1989.

WAR ON WASTE: Can America Win Its Battle with Garbage? by Louis Blumbers and Robert Gottlieb. Covelo, Calif.: Island Press, 1989. ISBN 0-9332280-92-0.

SPOTLIGHT

ICELAND

Population (mid-1990 est.): 260,000
Land area: 39,770 sq. miles
Population density: 6.5 per sq. mile
Births per 1,000 pop.: 19
Deaths per 1,000 pop.: 7
Rate of natural increase: 1.2 percent
Total fertility rate: 2.3 children per woman
Infant mortality rate: 6.2 deaths per 1,000 live births
Life expectancy: 78 years
GNP per capita (1988 est.): $20,160
Capital: Reykjavik



by Alex de Sherbinin

With a population the size of the Montgomery, Ala. metro area and a land area smaller than Kentucky, Iceland is one of the smaller entities on the world population scene. It may well be the only country in the world whose phone books list individuals alphabetically by *first* name. Yet its strategic ocean location and independent-minded people make a significant impact on world affairs.

Still, Iceland would be little more than an oversized iceberg were it not for the moderating effect of the Gulf Stream currents. Temperatures in Reykjavik vary from an average winter low of 31°F to a summer high of 52°F. This compares favorably with a low of −11°F and a high of 60°F for Fairbanks, Alaska, which lies in the same latitudes as Iceland, just under the Arctic Circle.

Iceland was a Danish colony from the 14th century until the First World War. It obtained a measure of independence after 1918, finally gaining full independence following World War II. The war was instrumental in creating links with the world political economy: afterward, the country became a stopover for many transatlantic flights, and Icelanders voted by a narrow margin to join the NATO alliance and accept the presence of U.S. military installations and troops. Today, some 5,000 U.S. troops and their dependents are stationed outside of Reykjavik—a sizable foreign enclave considering that the Americans constitute one in 25 of the metro area's population.

Most of the population is distributed on the island's southern flanks, with 55 percent residing in the capital itself. Unusual for a European country, fertility is higher than replacement level, which may reflect progressive Icelandic policies regarding parental leave (six months maternal and one month paternal) along with family benefit packages. The government shows little concern about population growth being too high; the country has one of the world's lowest population densities, and the economy, while subject to periodic recessions, is usually robust.

Icelanders' longevity, at an average of 78 years, is second only to that of the Japanese. There is no immediate concern about this aging population's effect on the economy, particularly since the moderately high birth rates are creating a continually growing pool of economically active adults. But it is likely that Iceland's free and universal health-care system could be strained with any increase in the absolute numbers of elderly.

Women's rights are high on the agenda of Iceland's president, Vigdis Finnbogadottir. In 1985 she participated in a day-long women's strike which was called to emphasize the important role of women in Iceland's economy and to highlight wage disparities between the sexes. Instruction on equal rights is built into school curricula.

Because of its reliance on exports of primary commodities, principally fish, Iceland has been described as a developed country with the economy of a developing country. (One product, surprisingly, is bananas, grown in some of the country's 40 acres of geothermally heated greenhouses.) Nonetheless, a modern manufacturing sector is in place, and Iceland maintains prosperity despite its chronic vulnerability to shifts in commodity prices and currency rates of exchange. Although not a member of the European Economic Community, Iceland's longstanding links with Europe allow easy access to markets, an access that it hopes to maintain beyond 1992 when European economic union commences.